



THE COBRA SYSTEM

HEATED C.T.A.

412-872-4149

Thank you for purchasing "The Cobra System".
Please read important information
below:

***THE COBRA SYSTEM must be installed by a certified electrician and plumber.
Warranty is rendered null and void if not following specific directions while installing
THE COBRA SYSTEM.***

***NOTE:**

- We recommend using Teflon tape for all pipe thread connections on all threaded fittings.
- Be sure there is no electric current going to The Cobra System CTA until units are filled with 100% anti-freeze (where the pressure relief valve is located) within a 1/2" to top inside tank.
- You cannot make any adjustments to the digital thermostats they are preset and locked out to ensure non-tampering for the correct temperature.

PROCEDURE FOR GETTING THE BEST RESULTS WITH THE COBRA SYSTEM AND YOUR WHEEL AND TIRE CHEMICALS

1. Prevent presoak spraying on wheels.
2. Even though you're using heat, make sure your chemical ratio is strong enough.
3. Spray on Dry Wheel & Tire (*No* prepping).
4. Spray pattern should be concentrated on wheel. Run off will promote tire cleaning.
5. Run alkali's not acidic on lower brushes.
6. Wheel blasters on at a minimum 25' to 50' feet from the Cobra's if possible.
7. Run your G57 Flojet air diaphragm pump at 90 psi for best chemical penetration. Must use a 100 psi air diaphragm pump. (if the pump is not in good condition then it may not open check valve spray nozzles)

WARRANTY

Parts manufactured by The Cobra System are covered for a period of 90 days from the shipment date and 1 (one) year on labor. Other parts which are purchased by The Cobra System used to manufacture The Cobra System products are covered by their respective manufacture warranties.

WARRANTY TERMS:

The Cobra System warrants to the original purchaser to be free of Defective Parts and Workmanship for a period of 1 (one) year. This warranty begins on the date of original retail delivery or original use, whichever occurs first. Repairs or replacements und warranty will not extend the warranty coverage. No benefits or remedies are available under this limited warranty while the invoice for the unit or related services remains outstanding. This warranty is Non-Transferable. If any part of the Cobra System C.T.A. Fails in normal use because of defective parts or workmanship performed by the manufacturer and is returned to us, then it will be repaired or assembly replaced. The alleged defective part of the assembly MUST be returned to the manufacturer, at your cost properly supported by purchase receipt, For inspection and credit consideration in order for the Replacement coverage to be applicable, As specified below.

ALL WARRANTY REPLACEMENTS AND FIELD REPAIRS MUST BE PRE-APPROVED. AN IDENTIFICATION REFERENCE MUST BE OBTAINED BEFORE ANY SERVICE IS PERFORMED.

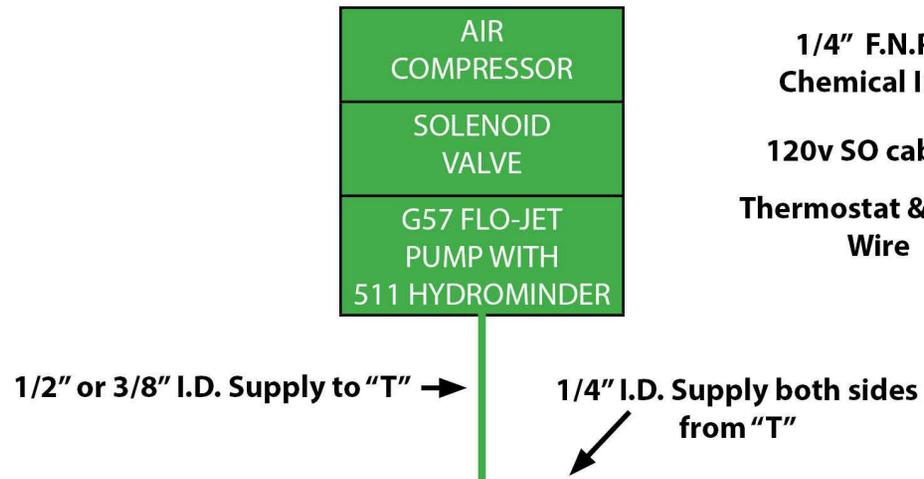
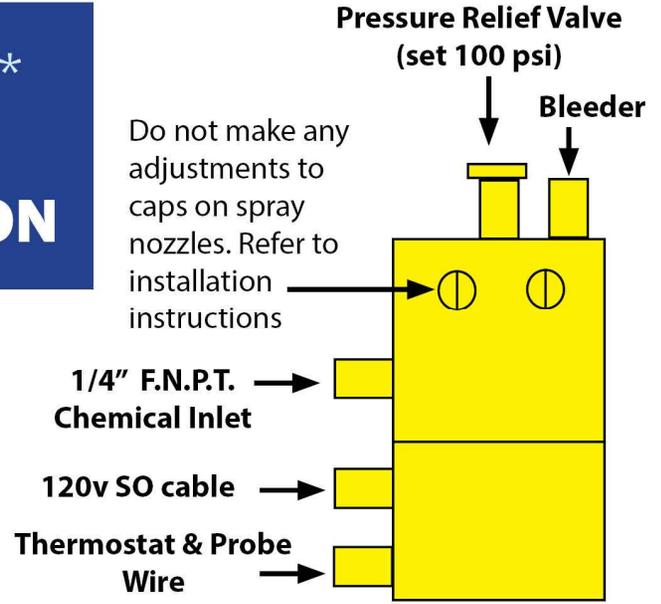
Operating Costs ****ONLY****
\$1.43 a day!
TYPICAL INSTALLATION

COBRA SYSTEM INCLUDES:

1	Set of C.T.A.'s
2	Temperature Control Switches
2	Poly Ball Valves - (Chemical Bleeders)
4	Diaphragm Check Valve Nozzle
4	V-Jet Foaming Nozzles
2	Pressure relief valves
2	1/4" x 1/4" Male Connectors

- Thermostat & Probe Wire
- 110 or 24 Volt Electric
- Chemical

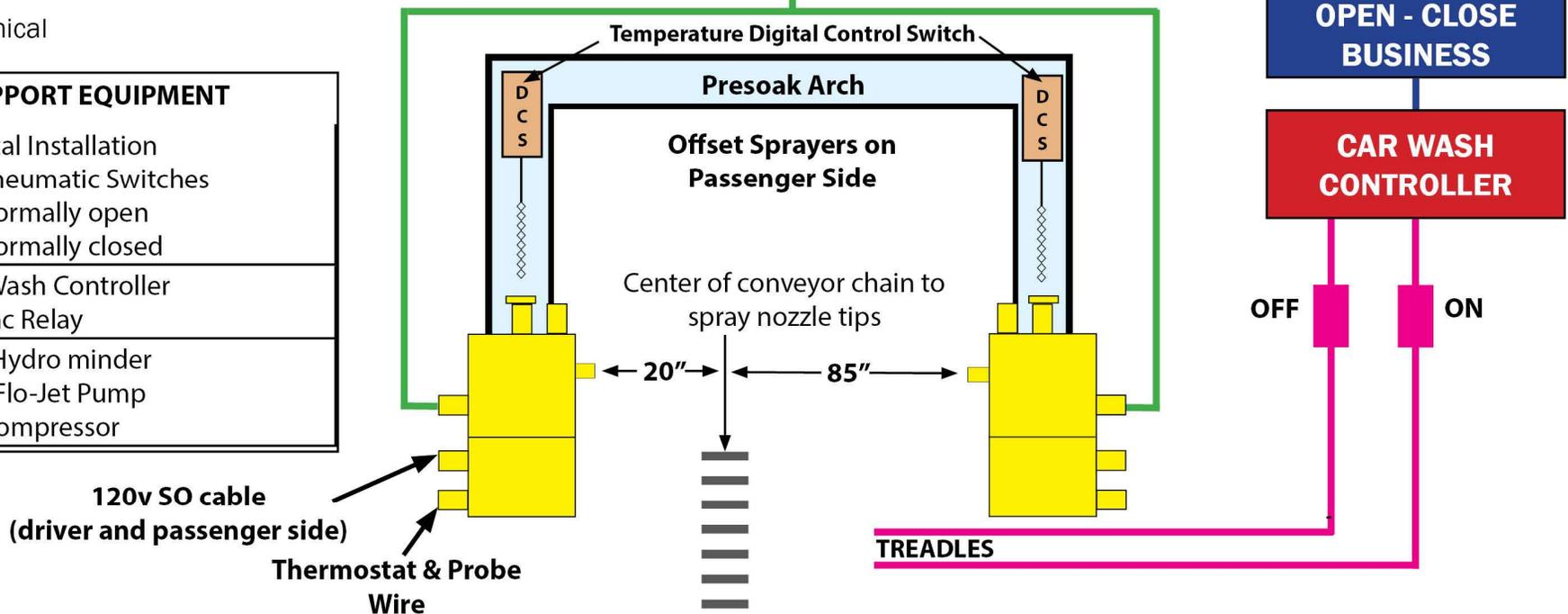
SUPPORT EQUIPMENT	
	Typical Installation 2 - Pneumatic Switches 1 - Normally open 1 - Normally closed
	Car Wash Controller 24 Vac Relay
	511 Hydro minder G57 Flo-Jet Pump Air Compressor



TIMER FOR CTA'S OPEN - CLOSE BUSINESS

CAR WASH CONTROLLER

OFF ON

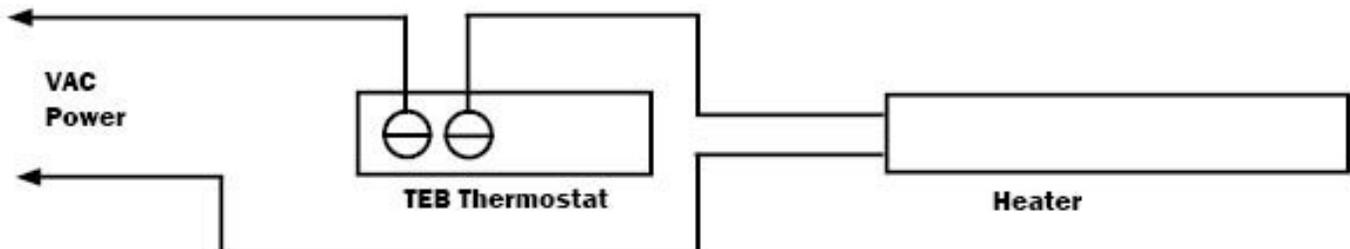




The Cobra System CTAs require a designated 15 amp breaker for each side. See Installation Instructions for 2019 models and up, Digital Temperature Control Switch (Page 4).

General Directions (for 2018 and later models with electro-mechanical thermostats)

1. Attach the thermostat with screws, to the part that is being controlled applying equal pressure to both screws.
2. Attach circuit wires to the 6-32 screw terminals provided.
3. Typical circuit diagram. A fuse or circuit breaker should be included in the circuit at the VAC source.



4. Apply power to the system.
5. Turn the shaft or screw adjust clockwise to increase the temperature setting.
6. Turn the shaft or screw adjust counter – clockwise to decrease the temperature setting.
7. Allow 15 minutes for the system to stabilize between adjustments. Repeat steps 5-7 as necessary.

Calibrating the TEB Thermostat at a Specific Temperature

Required Instrument – calibrated thermometer and sensor probe

1. Attach the thermostat to the application and wire it as described above.
2. Apply power and allow the system at least 15 minutes to stabilize.
3. Using the calibrated thermometer and sensor probe, determine at what temperature the thermostat is controlling the process.
4. Turn the shaft or screw adjust clockwise to increase the temperature setting.
5. Turn the shaft or screw adjust counter – clockwise to decrease the temperature setting.
6. Allow 15 minutes for the system to stabilize between adjustments. Repeat steps 5-7 as necessary.

INSTALLATION INSTRUCTIONS FOR DIGITAL TEMPERATURE CONTROL SWITCH

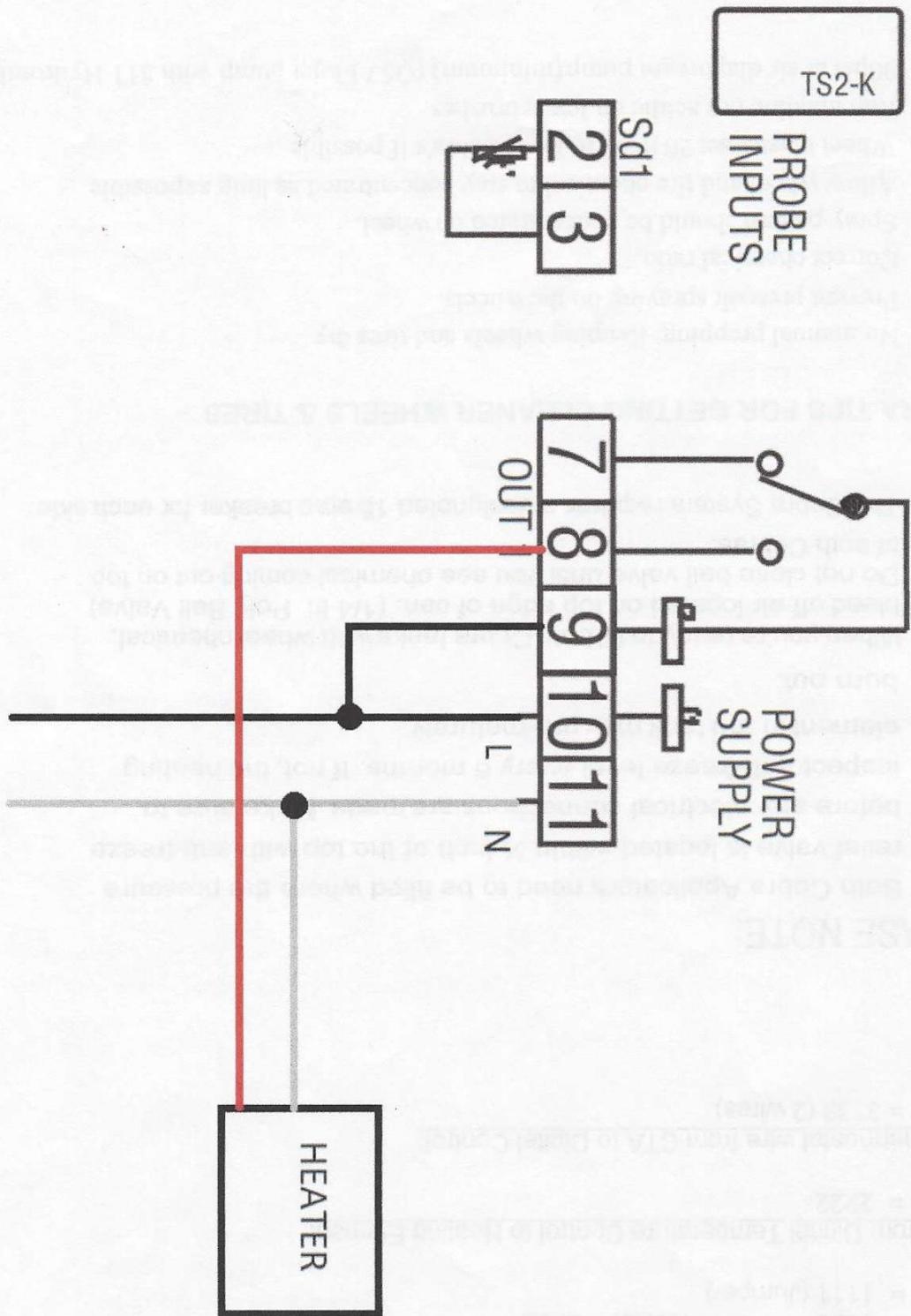
NEMA 4X Housing, Dual Stage, 20A Contact Rating

(must be installed by a certified electrician)

1. Mount water tight electrical boxes to both sides at top of presoak arch or any other rigid surface similar in height and distance to the CTA's.
2. Mount both Digital Temperature Control Switches inside the watertight electrical boxes. (all connectors to be watertight)
3. Then install 2 individual ½" PVC pipe runs from the Driver Side and Passenger Side CTA's and connecting them to the watertight boxes that houses the Temperature Control Switch.
4. Remove the Temperature Probe wire from the bottom section of both CTA's and feed each wire thru the ¼" stainless coupler into ½" PVC to make the connections inside the control box. The additional probe wire if needed CANNOT exceed the original probe wire coming from CTA's which is 15 feet or it will have a negative effect on or weaken the signal to the Digital Control Switch. Insert the 2 probe wires into the block connectors labeled #3. Replace cover with 4 screws. See wiring instructions on page 5 for power, heater and probe leads. *(Spray or apply electrical sealant to heating element connections)*

NOTE: If you need to lengthen the thermostat wire to the control lead wires, there's a thermostat wire extension kit that comes with the CTA's. *(Do not add any more length to this circuit. It may cause inaccurate temperature sensor signals to the heating element.)*

5. Follow wiring instructions for Probe Port and power connections. The controls will have numbered tags for your connections in the field.
6. All Control Settings are factory set and LOCKED OUT so tampering is not permitted.
7. Once the CTA's are powered up (after 15-20 minutes) you will see on the DIGITAL DISPLAY temperature of approximately 130 degrees F. (always keep the watertight box covers on during business operations)
8. Then the temperature will decrease to an Operating Temperature of 122 degrees F. When it reaches the Lower Set Point (121 degrees F) the Temperature Control will send power to the heating element and maintain the Operating Temperature 122 F until power to the Control Switch is OFF. When the demand for power is turned back on to the Control Switch it will repeat the cycle of Starting Temperature again then to its Operating Temperature.



Wiring Instructions

Main Power to Digital Temperature Control:

Neutral = 0000 Heater = 2222

Hot = 1111 (Jumper)

Power from Digital Temperature Control to Heating Element:

Heater = 2222

Probe thermostat wire from CTA to Digital Control:

Probe = 3333 (2 wires)

PLEASE NOTE:

- Both Cobra Applicators need to be filled where the pressure relief valve is located within ½ inch of the top with anti-freeze before any electrical connections are made. Make sure to inspect anti-freeze level every 6 months. If not, the heating element in the tank may pre-maturely burn out.
- When you're ready to fill both Cobra tanks with wheel chemical, bleed off air located on top edge of can. (1/4 in. Poly Ball Valve) Do not close ball valve until you see chemical coming out on top of both Cobras.
- The Cobra System requires a designated 15 amp breaker for each side.

COBRA TIPS FOR GETTING CLEANER WHEELS & TIRES

1. No manual prepping. Keeping wheels and tires dry.
2. Prevent presoak spraying on the wheels.
3. Correct chemical ratio.
4. Spray pattern should be concentrated on wheel.
5. Allow wheel and tire chemical to stay concentrated as long as possible
6. Wheel blaster set 20 to 40 ft. from Cobra's if possible
7. Run alkaline not acidic on lowerbrushes
8. 90psi at air diaphragm pump (minimum) (G57 Flojet pump with 511 Hydrominder)

Cobra CTA Instructions - Parts Inventory

- 1.) Remove (3) ¼" hex head bolts on outside of can
- 2.) Lift off top section-put aside
- 3.) In bottom section there will be (2) check valve nozzle body assemblies (1) pressure relief valve
(2) ½" male electrical adapter to attach to ½" FNPT coupler on bottom sections. (2) ¼" Poly Ball Valves bleeder for wheel and tire chemical on top outer side of Cobra.
(1) ¼"X ¼" male hose barb connector.
(1) Probe inserted and clipped in place with 15' of thermostat wire lead.

Assembly

NOTE: Use Teflon tape for all threaded connections.

- 1.) Caution- You must first fill top of both Cobras with 100% anti-freeze into ½" FNPT coupler within a ½" to ¾" to top inside can. Then plug with ½" MNPT until you are instructed to screw in the pressure relief valve.
- 2.) Screw in both ½" male electrical adapters, one for your SO cable (110v) and one for the thermostat/wire probe coming into element. (*Spray or apply electrical sealant to heating element connections*)
- 3.) See electrical configuration drawing for wiring instructions.
- 4.) Once you have completed your connections stand bottom sections on its legs and replace top sections. (To fit in place- line up ¼" FNPT coupler (wheel chemical inlet) with ½" male electrical adapters (bottom section) and replace the (3) ¼" Hex head bolts inside of can.) Do not over tighten.
- 5.) Screw in spray nozzle assemblies (Do not make any adjustments on spray nozzle caps, hand tighten only)
- 6.) Install pressure relief valve.
- 7.) Screw in the ¼"X ¼" male connector for your wheel and tire cleaner coming from your 511 hydro minder. "NOTE"- your feed coming from your hydro minder needs to be 3/8" to ½" to the "T" split that will feed each Cobra downsizing to a ¼" feed to the ¼" x ¼" male connector.
- 8.) After connecting your ¼" feed to the ¼" male connectors, manually turn on your 511 hydro minder and run until you see wheel and tire cleaner coming out of ¼" ball valve on tank top. Then turn pump off.
- 9.) Make sure that driver side and passenger side Cobras have their own 15 amp designated circuits.

NOTE: - We highly recommend using a timer to turn on and off your Cobra CTA's when needed or you could possibly cause damage by not using or spraying heated wheel cleaner through your nozzle assemblies (All night without usage, the spray nozzle tubes and assembly may clog up.)
Once the power to the Cobra's are on it should only take 15 minutes to be fully heated.

If you have any questions about installation please call 724-344-1492

"HAPPY WASHING"